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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,015	04/13/2004	David Tyvoll	10017624-1	3541

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EXAMINER

FAISON, VERONICA F

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

12

Office Action Summary	Application No. 10/823,015	Applicant(s) TYVOLL, DAVID	
	Examiner Veronica F. Faison	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
 4a) Of the above claim(s) 20-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18 and 19 is/are rejected.
- 7) ☐ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-19, drawn to an ink composition, classified in class 106, subclass 31.6.
- II. Claims 20-35, drawn to method of printing, classified in class 347, subclass 100.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product can be used in a materially different process such as lithographic printing.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Bradley Haymond on March 31, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 20-35 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "high" in claim 8 is a relative term which renders the claim indefinite. The term "high" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The term "low" in claim 8 is a relative term which renders the claim indefinite. The term "low" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 14 recites the limitation "the first domain" in line 1 of claim 14. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "the second domain" in line 2 of claim 14. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 9, 10-12 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato (US Patent 6,440,203).

Kato teach an ink composition comprising a first colorant and a second colorant, a penetrating agent, water and a water-soluble organic solvent. The first colorant is a pigment, which is dispersible and/or dissolvable in water without any dispersant and the second colorant is a pigment and a dispersant for the dispersing the pigment (abstract and col. 2 lines 33-35). The reference further teaches that the self-dispersing pigment has a functional group attached to the surface, wherein the functional group may be carbonyl, carboxyl, and sulfone group (col. 2 lines 43-47). The first and second colorant may be a carbon black pigment (col. 3 line 20 and col. 4 line 5-6). The first and second colorant have an average particle diameter is in the range of 10 to 200 nm and the weight ratio of the first colorant to the pigment contained in the second colorant 1:1 to 3:1 (col. 4 lines 44-48). The reference further that the dispersant for the second colorant may be a polyacrylic acid (col. 4 line 54-col. 5 line 4). The composition as taught by Kato appears to anticipate the claimed invention.

Claims 1-4, 10-12, 15, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Koitabashi et al (US Patent 6,387,168).

Koitabashi et al teach an ink composition comprising a first pigment, a second pigment and a dispersant, both of the pigments being dispersed in an aqueous medium. The reference further teaches that the first pigment is a self-dispersing pigment (carbon black) wherein the pigment has functional groups attached directly or through an atomic

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group to the surface and the functional group is selected from the group consisting of –SO₃M, –COOM, –PO₃HM and –PO₃M₂ (col. 7 lines 24+). The second pigment may also be a carbon black pigment dispersed with a dispersant, wherein the pigment is preferable capable of being stably dispersed in the aqueous medium for the first time as a result that the polymeric dispersant has been adsorbed on the surfaces of pigment particles (col. 9 line 36-col. 10 line 51) and the dispersant may be acrylic acid. The weight ratio of the first pigment to the second pigment is in the range of 5/95 to 97/3 (col. 10 lines 8-11). The printing medium may be paper, nonwoven fabrics, OHP paper and leather. The reference further teaches that the a material for forming the coating layer comprising a water-soluble resin, water-dispersible resin or the like as a main component and a cationic compound, surfactant, filler and/or the like (col. 16 lines 8-44) and that the water-soluble resin may be cellulosic resin. The composition as taught by Koitabashi et al appears to anticipate the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-8, 15, 16, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (US Patent 6,440,203).

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Kato is described above, but fails to specifically exemplify the use of dispersion with a polyacrylate and sulfonate as claimed by applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the specific dispersion with a polyacrylate and sulfonate as claimed by applicant as Kato also discloses the use of dispersion with a polyacrylate and sulfonate but shows no example incorporating them.

Kato and the claims differ in that Kato does not teach the exact same proportions (weight ratio) as recited in the instant claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by Kato overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Claims 5-9, 13, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koitabashi et al (US Patent 6,387,168).

Koitabashi et al is described above, but fails to specifically exemplify the use of dispersion with a polyacrylate and sulfonate and interact with a domain cellulose as

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claimed by applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the specific dispersion with a polyacrylate and sulfonate and interact with a domain cellulose as claimed by applicant as Kato also discloses the use of dispersion with a polyacrylate and sulfonate and interact with a domain cellulose but shows no example incorporating them.

Koitabashi et al and the claims differ in that Koitabashi et al does not teach the exact same proportions (weight ratio) as recited in the instant claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by Koitabashi et al overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Allowable Subject Matter

Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The references alone or in combination fail to teach first pigment dispersion and second pigment dispersion, wherein the first dispersion comprises anionically modified polyethyleneimine or pentaethylenehexamine.

Conclusion

The remaining references listed on forms 892 and 1449 have been reviewed by the Examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 571-272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VFF
11-28-05


J.A. LORENZO
SUPERVISORY PATENT EXAMINER